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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/762,765	05/01/2001	Costa Tzoganakis	1811-228 MIS:jb	7506
24223	7590	09/22/2004	EXAMINER	
SIM & MCBURNEY 330 UNIVERSITY AVENUE 6TH FLOOR TORONTO, ON M5G 1R7 CANADA			TESKIN, FRED M	
			ART UNIT	PAPER NUMBER
			1713	
DATE MAILED: 09/22/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/762,765	TZOGANAKIS ET AL	
	Examiner	Art Unit	
	Fred M Teskin	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 18-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18, 19, 21 and 22 is/are allowed.
- 6) ☒ Claim(s) 1-9 and 20 is/are rejected.
- 7) ☒ Claim(s) 10-15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

The Amendment of May 26, 2004 has been entered in full. Accordingly, claims 1-15 and 18-22 are currently pending and under examination.

Upon reconsideration, the prior art rejections of the previous Office action are withdrawn in view of applicants' arguments to the effect that (1) WO '665 seeks to avoid branching and cross-linking, (2) Dow teaches the formation of block copolymers as opposed to the branched structure of the present invention and (3) Kennedy uses a liquid phase process to produce a star structure, not a branched structure.

Claims 1-9, 12 and 20 are subject to new grounds of rejections as detailed below.

Claims 2, 4 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2, 4 and 6 are incomplete, hence indefinite, due to lack of definition for the variable "Z" in each of formulae I, II and III. Moreover, resort to the specification does not aid in ascertaining the scope of this variable, as the antecedent disclosure also fails to expressly define Z (see, e.g., page 5, lines 10+, page 6 and page 7, lines 25+). Thus, apart from the oxygen atoms contained in the specific compound exemplified on page 7, it is unclear what chemical entities "Z" is intended to represent in said claims.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 and 20 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over US 6084030 to Janssen et al ("Janssen").

The subject matter of the rejected claims is a branched copolymer of a polyolefin and a silicone polymer, which produced by melt phase extrusion hydrosilylation. The polyolefin can be polypropylene, per claim 20.

Janssen discloses branched polymer structures formed by linking polyolefin pre-arms to a polyhydrosilane backbone polymer via a hydrosilylation reaction. Illustrative of the backbone polymer are polyhydrosiloxanes represented by a general formula embracing of the polyhydrosiloxane formula of claim 3. See, col. 8, lines 25+ and col. 9, lines 18+, where the hydrosilylation reaction conditions are discussed.

As to a branched copolymer of polypropylene and a silicone polymer, attention is directed to Example 7 (col. 36) of Janssen, detailing the synthesis of an eight-arm polymer by reacting a terminally unsaturated polypropylene (Polymer E) with a polymethylhydrosiloxane per the procedure of Example 6. While this reaction was conducted in xylene solvent, the final product appears indistinguishable, chemically and structurally, from the branched copolymer produced by applicants' melt phase extrusion procedure. As noted in the previous Office action, the patentability of a product-by-process claim depends on the novelty and unobviousness of the product itself, not the recited the process. Thus, the fact that the branched polymer of Janssen is made by a different process is not necessarily determinative of patentability as to the final product.

Concerning claims 3-8, Janssen teaches the alternativeness between polymethylhydrosiloxane and specific species of polysilanes within the claimed formulae; e.g., methylhydrodimethylsiloxane copolymer, methylhydrocyclosiloxane polymer (see col. 9, lines 6-15). Given an expectation of functional equivalence as backbone polymer, it would have been obvious to one of ordinary skill in the art to substitute any of the latter species for polymethylhydrosiloxane when forming the multi-arm polymer of Example 7.

As to claim 9, examiner notes the procedure of Example 6 (followed in Example 7) provides a 5/1 molar ratio of Si-H to C=C in the polyolefin (per col. 36, lines 58-60). Given the stoichiometric excess of Si-H groups, it is reasonable to infer the presence of at least some unreacted (i.e., free) Si-H groups in the final polymer product, per claim 9.

Accordingly, based on the above analysis, examiner considers Janssen's branched polymer with polyolefin arms to be patentably indistinguishable from the branched copolymer products defined by the rejected claims.

Claims 10-15 are objected to as being dependent on a rejected base claim but would be allowable if rewritten in independent form to include all the limitations of the base claim and any intervening claim.

Claims 19, 21 and 22 are allowable. The claimed process for preparing a branched polypropylene is not disclosed nor fairly suggested in any prior art document(s) located or identified by the examiner as of the date of this Office action.

In view of the new grounds of rejection, this action is made non-final.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner F. M. Teskin whose telephone number is (571) 272-1116. The examiner can normally be reached on Monday through Thursday from 7:00 AM - 4:30 PM, and can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The appropriate fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



FRED TESKIN
PRIMARY EXAMINER
MIS

FMTeskin/09-18-04